

UPDATE PROJECT

1. Team

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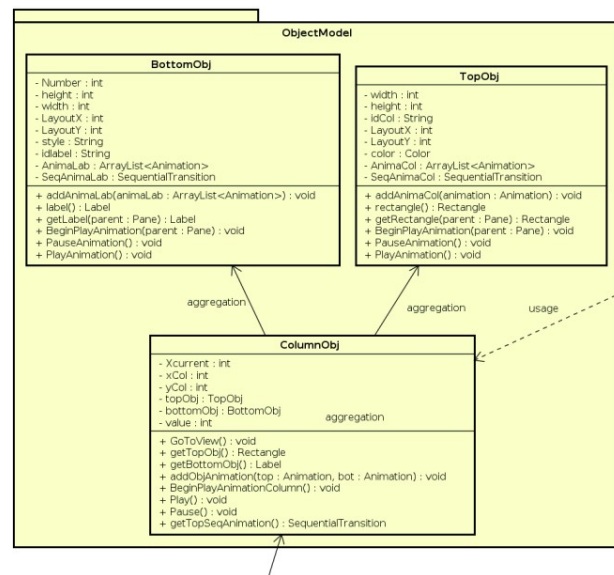
Topic: Visualization Sorting Algorithm

2. Update after report

2.1: Redistribute package *ObjectModel*

- add 2 classes *TopObj* and *BottomObj*

- there is aggregation relationship between class *ColumnObj* and 2 classes *TopObj* and *BottomObj*. Instances of two classes *TopObj* and *BottomObj* are made up of instances of class *ColumnObj*.



2.2: The usage properties of Inheritance relationship

- There is relationship: 3 classes *QuickSort*, *RadixSort*, *ThreeWayRadixSort* extends class *AnimationSort*. In this relationship, all methods, functions uses *this.getListObj()* to call the list of initialized *ColumnObj*.

2.3: Polymorphism

- Update class: *AnimationSort*

- + add a method *Sort()*.

- Update class: *QuickSort*, *RadixSort*, *ThreeRadixSort*

- + Override method *Sort()* of class *AnimationSort* for each above class.

- + In each above class, the method *Sort()* implements some separate functions.

- Update class: *Controller*

- + Initial a object: *AnimationSort* *aS* = *new AnimationSort()*.

- + Depending on the selected option, downcasting the *aS*

```
if(option == 1) {
    aS = new QuickSort(paneResult, ListObj);
}
if(option == 2) {
    aS = new RadixSort(paneResult, ListObj);
}
if(option == 3) {
    aS = new ThreeWayRadixSort(paneResult, ListObj);
}

aS.sort();
```

+ Depending on the type of aS, method *Sort()* will implement compatible with override method written in 3 classes *QuickSort*, *RadixSort* and *ThreeWayRadixSort*

3. Contribution

- Each member joins 33,3% of project

- Vũ Ngọc Nam:

+ Class *ThreeWayRadixSort*

+ Class *InputControl*: *getNumberCharacters()*, *toStringColumnHeight()*

+ Class *ColumnObj*

+ Class *BottomObj*

+ Class *TopObj*

- Lê Đình Quyền:

+ Class *AnimationSort*

+ Class *QuickSort*

+ Class *InputControl*: *TestInput()*, *toArray()*

+ Class *ColumnObj*

+ Class *BottomObj*

+ Class *TopObj*

- Trần Xuân Đức:

+ Class *RadixSort*

+ Class *Controller*

+ Package *ViewFXML*

+ Class *ColumnObj*

+ Class *BottomObj*

+ Class *TopObj*